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IN THIS ISSUE

	Page
Mexico Freezes Strawberries for the U. S.	3
We Can't Just Send Our Farm Surpluses Overseas	9
Agricultural Attachés — U. S. Farmers' Representatives Abroad	10
FAS Publications That Report the News of Foreign Markets	12
Agriculture and Democracy in the Middle East	13
Keeping Our Wheat Markets	17

FRONT COVER

Middle Eastern Farmer

This farmer in the valley near Burijird, Iran, winnows his wheat as his forefathers did. Helping him and other Middle Eastern farmers operate their farms more efficiently and so raise their standards of living goes a long way toward strengthening and securing the development of the Middle East on a democratic basis; see page 13. (Photo courtesy of the U. S. Army.)

BACK COVER

Centers of Frozen-Strawberry Industry in Mexico

Mexico's million-dollar frozen-strawberry industry is concentrated in two States.

NEWS NOTE

World Agricultural Developments and Outlook for 1954-55 Reviewed in New Report

In keeping with its practice of the past 9 years, the Foreign Agricultural Service has prepared a report on world agricultural developments and outlook for 1954-55.

The report, published as a Foreign Agriculture Circular entitled "World Agricultural Situation," summarizes world output of the major agricultural products, based on official estimates of foreign governments and on information furnished by the U. S. Department of Agriculture's agricultural attachés abroad.

It states that the world output of agricultural products in 1954-55 can be expected to approximate the 1953-54 outturn, with probably a 2-percent reduction in food products, calorie-wise. However, with large increases in carry-overs of wheat, sugar, rice, and dairy products, total available food supplies are larger than last year resulting in continual marketing problems. On a per capita basis they are nearly as large as a year ago. These large carry-overs are not expected to be greatly reduced in 1954-55.

Credit for photos is given as follows: pp. 3, 6-8, Mrs. Ana M. Gomez; p. 15, Arabian American Oil Company; p. 18, Walter Luden of Hamburg (through our Assistant Agricultural Attaché Richard A. O. Schwartz); p. 19, George J. Dietz.

FOREIGN AGRICULTURE ALICE FRAY NELSON, EDITOR

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Women pick most of the fruit in the Mexican strawberry fields.

Mexico Freezes Strawberries For the U. S.

By ANA M. GOMEZ

In the past six years a new business has been growing up in Mexico—freezing strawberries and exporting them to the United States. So successful has been the venture that it has encouraged growers to double their yields per acre, triple their acreages, and quadruple their total production.

The business had its beginning in 1948, when a strawberry-freezing plant was established in Irapuato, in central Guanajuato. Since that year 6 more plants have begun operations and exports have grown from less than 200 metric tons to more than 4,000.

The Districts

Of Mexico's 32 States, 19 grow strawberries; but only 2—Guanajuato and Michoacán—produce for export.

The Guanajuato strawberry district is the most important in Mexico: in 1954 it accounted for 75 percent of all the strawberries grown and 97 percent of the exports. It lies atop a broad plateau about 5,700 feet above sea level, and extends northward a few miles beyond Silao, southwest to Abasola, and southeast to Salamanca (see the map on the back cover). The heaviest concentration of strawberry fields is in the neighborhood of Irapuato, which gives its name to the whole district. Soils of the area range all the way from sandy loam to heavy black clay. Temperatures fall as low as 24° F. and rise as high as 100°, with monthly averages ranging from 58° in January to 74° in May. Generally the

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district has only about 17 days of frost a year and is frost-free from April through October.

The only other district producing strawberries for export, the one in Michoacán, is just west of the city Morelia. In 1954 it had 160 acres in the crop and produced 500 metric tons. Its altitude is about 6,300 feet, and its average monthly temperature ranges from 57° in January to 69° in May. It has grown the fruit for more than 50 years but has been freezing it for export only since 1953.

Size of the strawberry fields varies. In the Irapuato district the average is about 40 acres; the largest is reported to be 175. In the Morelia district, where most of the land belongs to ejidos, or communities that have received land from the government under the agrarian program, the fields are small, averaging about 7 acres, and even the largest is said to be no more than 35 or 40. In neither district do many farmers plant all their land to strawberries; most have other crops too, such as corn, wheat, tomatoes, and potatoes.

The usual strawberry-planting time lasts from September to mid-November. Most of the planting is done by hand, although one of the packing plants has recently bought four mechanical planters. About 2½ months after planting, if the weather is favorable, the first blooms appear and in another month the first fruits are ripe. Thus, in years with little or no frost, picking may start as early as January; otherwise it may be delayed another month or two. In 1954 harvest began on January 15 and lasted well into August though normally it is almost over by the end of June. Fields are usually picked every other day except at the height of the season, in April, when they must be picked daily.

The Irapuato district now has 6 strawberry-freezing plants, and the Morelia district has one. Their freezing and storage capacities are as follows:

	Freezing (Metric tons per day)	*Storing (Metric tons)*
Irapuato:		
Plant A	30	500
Plant B	15	50
Plant C	5	25
León	18	25
Salamanca	18	25
Silao	8	25
Morelia	12	50
Total	106	700

Increases in Production

To the market opportunities offered by the new freezing plants, farmers have responded by increasing their production. Not only have they planted more acres—in the Irapuato district alone they have multiplied their acreage 4 times since 1948—but they have improved yields per acre.

Much of their increase in yields has been accomplished by the introduction of more productive varieties. Until 1949 the strawberries grown in the Irapuato district were almost all of a variety known as Fina. Just where it had its beginnings is not known, but it probably derives from a French variety brought to Irapuato by Maximilian while he was emperor of Mexico, sometime between 1864 and 1867. Its yields are low and its berries have a hard tip that makes them undesirable for freezing. In 1949, therefore, one of the freezing companies in Irapuato looked about for a more satisfactory variety and decided on the Klondike.

The Klondike is a vigorous, highly productive variety that does well in southern United States and is suited also to the mild climate of Mexico. In 1949 the company introduced a few plants, and the next year it imported half a million. Five years later, the Klondike was predominating in Irapuato's strawberry fields: it made up 60 percent of the harvest in 1954, leaving Fina far behind at only 30 percent. The remaining 10 percent consisted chiefly of Blakemore and four varieties originated by the University of California—Shasta, Campbell, Lassen, and Sierra.

Several other varieties—among them, Missionary, Aroma, Klonmere, Tennessee Beauty, and a few French varieties—are now being tested by one of the freezing companies in Irapuato. In 1954 this company imported 1 million plants, half of them Klondike and half of them Blakemore, and planted them in March for propagation purposes. The plants were debloomed to promote growth. It was expected that each parent would produce 10 to 15 plants, but by the end of August each had produced 50 to 80. This high yield is attributed to the fact that the plants had been carefully selected, were virus-free, and had been dormant at the time of shipment; besides, hormones and fertilizer had been added to the propagating beds, and the weather had been favorable.

The new plants were transferred to the fields in

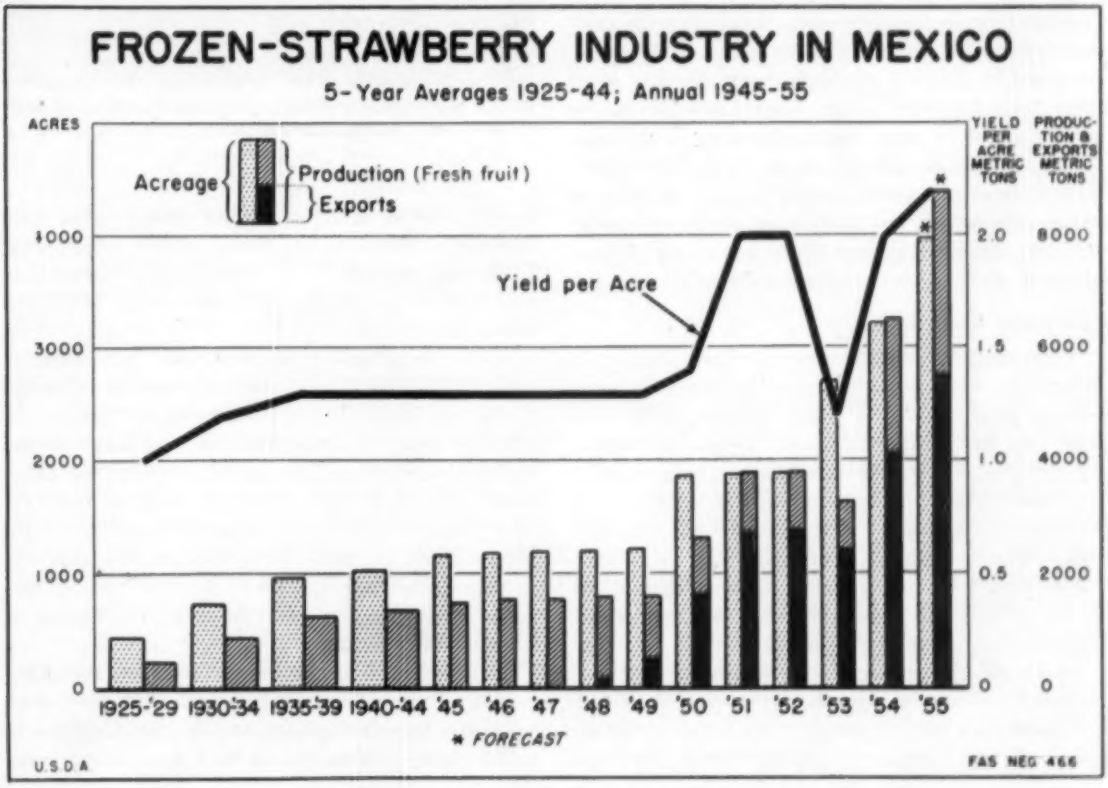
the fall of 1954 for production in 1955, when, it is estimated, the harvest will consist 60 percent of Klondike, 25 percent of Blakemore, 10 percent of Fina, 4 percent of University of California, and the rest of such varieties as Gem, 20th Century, and Old Joe. By 1956, Irapuato growers say, they will be raising no more Fina.

In the Morelia district the strawberry that prevailed until 3 years ago was a variety known as fresa Criolla de Morelia. Its origin, too, is said to be French. In 1951 the Klondike was introduced from Irapuato; and by 1954 it had been so widely planted that it made up one-third of the year's harvest. The other two-thirds was still Criolla, with a little Shasta besides. In this year's harvest the positions of Klondike and Criolla will probably be reversed. The Klondike berries are all frozen for the export market; the others are sold fresh at home.

Another factor in the recent increases in per-acre yields has been the general adoption, since 1950, of the double-hill system of planting instead of the single. Under this system each row really consists of two rows, 14 inches apart, with the plants set diagonally opposite each other. It is bound to increase yields: not only does it permit about 28,000 plants per acre instead of 15,000, but it helps to keep moisture in the soil. Fields are usually replanted every 2 years.

Irrigation, too, is being used to increase yields. Except for a few patches of wild strawberries, all the fields are irrigated. An unfortunate result of this aid to production, however, is the fact that such widespread use of water has seriously depressed the water table and necessitated the deepening of wells. Six years ago water could be reached at 15 feet down; now, not until after 250 or 325 feet.

Some increases in yields are probably coming through the recent attention to the condition of the soils themselves. Fertilizer, for instance, was applied for the first time on a small area in 1953; and in 1955 probably about 750 acres in the



Irapuato district will be fertilized. Some soils are being treated for salinity. Others are being treated for alkalinity: in the Irapuato district, for instance, the *p*H of the soil is about 8, too high for strawberries, which require a *p*H of 5 to 6.5.

All these efforts to increase yields have literally borne fruit: in 1951 the average yield per acre, after years of staying at 1⅓ metric tons per acre, suddenly jumped to more than 2 tons. At that new high it has remained ever since, except in 1953, when the whole Irapuato district suffered a temporary reverse. The season that year began with normal yields in March, but shortly thereafter pickings began to fall off and continued to do so until in May they were only one-fifth of normal. By the end of May there was little fruit in the fields and practically no buds or flowers. Several explanations for the phenomenon have been offered, but a reliable conclusion is that it was the result of unusually low temperatures during October-November 1952, which interrupted the floral initiation process. The yield rose again in 1954 to 2 tons, and is expected to reach 2.2 tons in 1955.

From farm to farm, however, there are wide variations in yields per acre, chiefly because of a great diversity in cultural methods. Some farmers keep their fields free from weeds the year around; others permit weeds to grow between seasons to such an extent that the strawberry plants are hardly visible. A few farmers buy imported plants; more buy plants propagated from imported stock; and some still use the local variety. Only a few apply large amounts of fertilizer; most use none at all.

Costs and Returns

This diversity in farming methods makes it difficult to come up with a figure representing total costs of production, but within certain limits such costs can be evaluated. In the Irapuato district, for instance, an acre of strawberry land now sells for about $100 per acre without irrigation, and from $160 to $325 with it. Drilling a well, at nearly $5 a foot, costs from $1,200 to $1,600. A pump and the electrical installation of it, for a field of 50 to 60 acres, costs something over $2,000; power for operating it, about $15 an acre.

As for the strawberry plants themselves, the cost ranges from nothing for the local variety to $14 a thousand for the imported. To set out a double-row bed with imported plants would come to nearly $400 an acre, an expense that most farmers consider uneconomical. Good plants propagated from imported plants are now available to farmers and can be purchased for only about $1.20 per thousand.

Two rows within a row—that is the device that strawberry growers in Mexico are using to increase their yields per acre. This way of nearly doubling the number of plants in a bed was first practiced in Mexico in 1950, after the manager of one of the country's packing plants had made a visit to California's strawberry fields.

Labor for planting, weeding, and cultivating is paid by the day, usually with 8 pesos, or 64 cents. Total costs are variously estimated at from $65 to $130 per acre, depending on the care taken of the fields. Picking, which adds another $16 to the labor costs, is paid at the rate of 10 centavos per kilo (2.2 pounds)—in United States terms, a little more than a dime for every 30 pounds; at this rate the average picker, who gathers 50 to 70 kilos a day, earns a daily wage equivalent to 40 or 56 cents in United States money.

For the typical grower, then, total costs are likely to range from $100 to $160 an acre. But the grower who uses imported plants and applies fertilizer is said to have costs as high as $650 an acre; he, how-

Young strawberry plants in a double-row bed. This method of planting conserves the moisture in the soil and results in higher yields per acre.

ever, expects a yield of from 6 to 8 metric tons an acre.

To meet the costs of planting and cultivating, growers can usually obtain credit from the freezing plants, to the extent of $30 to $60 per acre. This money is made available in several installments beginning in July or August. Harvesting is financed by the grower himself from the income he receives from the sale of the crop. Long-term credit is difficult to obtain.

In 1953 the price paid to growers by the freezing plants was 1 peso per kilo (about 5.3 cents per pound) and by the beginning of the 1954 season it had risen to 1.1 pesos. When the peso was devaluated, on April 19, 1954,[1] the price rose to 1.5 pesos and by the end of the season was up to 1.75. At the present time the plants are offering growers 1.8 pesos (6.5 cents a pound) for the 1955 crop.

[1] Prior to devaluation the peso had been worth 11.6 U. S. cents; since, it has been worth 8 cents.

Processing

During the strawberry season the plants operate on every picking day, beginning at two o'clock in the afternoon, the hour when picking ends, and continuing until all the day's berries have been processed.

The plants prepare the strawberries for freezing by sending them through a processing line, which usually consists of 2 or 3 stemming tables, a washer, a grading machine, 2 conveyor belts, on which the berries are selected and from which they go to the cans, and a scale for weighing the filled can; in some plants the line includes also a mechanical slicer and a purée machine. Output of a line varies from ½ metric ton per hour to somewhat more than 1. The largest plant has 3 such lines; the smallest plants have only one. Each line requires from 150 to 225 workers, most of them women. Rates for day workers vary greatly, from 56 cents to $1.20.

The fruit is packed with dry sugar into large cans. Three plants use 27-pound cans for whole berries and 29-pound cans for purée. All other plants pack in 30-pound cans, but use also a few 10-ounce packages and 10-pound cans for whole berries. One part of sugar is used to four parts of fruit. The weight of the sugar about replaces the weight the berries have lost in the process of stemming, washing, and selection.

Of the total output of the industry, approximately 60 percent is estimated to be whole strawberries, 15 percent sliced, and 25 percent purée. About one-third of the pack of whole berries are classified as large; the rest, as medium. Small berries are generally puréed.

Exports

When strawberries were first exported from Mexico, in 1948, only 170 metric tons were shipped. But by 1954 exports had reached a new record—4,156 tons valued at approximately $1 million. In terms of railroad cars holding 2,000 cans each, these exports amounted to 152 cars, 132 of them processed in the Irapuato district, 17 in Morelia, and 3 in Mexico City. Of the fruit processed in Morelia and Mexico City, all but 4 carloads were grown in the Irapuato district.

Shipments are made principally through the ports of Laredo and Ciudad Juárez; a few go through Matamoros.

Nearly all exports go to the United States, where the principal markets are Chicago, New Orleans, Houston, New York, and Philadelphia. More than half of the frozen whole berries are used in making preserves; the rest go into pies and other pastry. The sliced berries and the purée are intended mainly for ice cream; the purée is used also in combination with the whole berries for making preserves.

In the first years the fruit was shipped to the various markets on consignment; now most of it is shipped f.o.b. border, though some has been shipped f.o.b. Irapuato, reportedly at prices of 13 to 14.5 cents a pound. Prices at Laredo in 1954 have been reported to range from 16 to 23 cents per pound, including the expenses of shipping from Irapuato. The current Laredo price of 21 cents, for example, includes expenses as follows:

	Cents per pound
Mexican export duty (13% of Irapuato price of 15.3¢ per lb.)	2.0
U. S. import duty (14% of Irapuato price)	2.1
Freight	.6
Refrigeration	.1
Insurance and import duty bond	.5
Border crossing and sundry expenses	.4
Total	5.7

Prospects

Strawberries are currently considered one of the most profitable crops in Mexico. The higher prices paid to growers since the devaluation have greatly increased profits, for costs of production have not risen in the same proportion. Besides, the domestic market for strawberries has expanded during the past few years: one grower reports that in 1948 it was possible to bring about a sharp drop in the Mexico City market by sending in a shipment of only 10 tons; but at the present time a shipment of even 50 tons will not depress the market significantly. The retail price for fresh strawberries in that city fluctuates between 25 and 50 cents a kilo (2.2 pounds), depending on the time of year and the supply of fruit.

Strong competition for the fruit has grown up between the fresh market and the freezing plants, as well as among the freezing plants themselves. To be certain of having a supply of fresh fruit, three of the plants grew some of their own fruit in 1953-54; two more are planning to do so for the 1955 season. Together, the seven plants are said to be capable of freezing two or three times as much as they did in 1954, and are therefore not likely to expand their capacities during the next few years.

In the Irapuato district, one of the most important agricultural regions in Mexico, a considerable expansion in strawberry acreage is possible. Already some shift from potatoes to strawberries has

One of the six strawberry-freezing plants in the Irapuato district.

been reported in the Silao area, one of the most important potato areas in the country. The district is also favored in having a fairly abundant labor supply. In the Morelia district, however, conditions are not so favorable: holdings are small and land suitable for strawberries is scarce.

There are also prospects for further increases in yields, considering the obvious interest that farmers have in achieving them and the possibilities that have already been demonstrated.

Should production this year reach the heights anticipated, exports may total 5,500 tons, enough to fill 200 railroad cars. Thus far the plants have had no difficulty in exporting their entire output, but some are expressing concern over the future of their market, in view of the rapid expansion of the strawberry-freezing industry in the United States.

In an address at the 41st National Foreign Trade Convention, Assistant Secretary of Agriculture Earl L. Butz gives some reasons why

We Can't Just Send Our Farm Surpluses Overseas

American agriculture today has a great sales and distribution problem: What to do with our excess agricultural production? There is one well-meant suggestion that is made to us almost daily—just send it overseas!

When we think with our hearts, the foreign disposal of our excess farm commodities appears to be simple, logical, and humanitarian. A picture comes to us of the world's millions who need more milk, more bread, and more clothing. As citizens of an enlightened charitable nation, we have accepted the ideal of trying in every way practicable to move these commodities into world use.

And so, having accepted that ideal, what are we able to do about it? The truth is, we're not able to do very much. Our idealism every day becomes a little more blunted by the hard wall of reality. What we commonly speak of as "foreign disposal" is given a less charitable name by some of our foreign friends; they call it "dumping." At every hand we are admonished to use care that we do not upset the world market, that we do not wreck world prices, that we do not use our surpluses to ruin foreign farmers. And, we must admit, often these are the fears of honest men. So we see that giving things away, or selling them at bargain prices, sometimes can be not only unpopular but even impractical in the vast arena of international relationships.

I do not want to create an impression that is unduly pessimistic. I have a high regard for the potential contributions of the surplus disposal programs that the Congress has created. Under the Agricultural Trade Development and Assistance Act of 1954 (Public Law 480, 83rd Congress), we are negotiating at the present time with a number of countries for their greater use of our excess commodities. Substantial quantities of grains, cotton, tobacco, fats and oils, dairy products, and some other commodities as well—over and above the quantities sold under normal commercial trade—will move into foreign consumption this year because of our foreign disposal efforts. Some will move as relief shipments, some as economic assistance, some under the label of mutual defense, and some in return for foreign currencies, thereby helping to get around the dollar shortage problem. By no means, however, will the total movement be a "solution" to our surplus problem. The basic problem is too big for a single, simple solution.

We cannot expect our foreign friends to bail us out of our agricultural difficulties. American agriculture—modern, efficient, highly productive— offers its own best reasons why this is so. For some commodities, our export market is highly important. But in the main, American agriculture is geared to its prosperous home market, with high volume export of a few basic commodities only. We can logically expect this to hold for the future.

by **FRED J. ROSSITER**

The transfer of United States agricultural attachés from the Department of State to the Department of Agriculture has focused new attention and interest on the activities of the agricultural attaché system overseas. The attachés—who long have served as the "eyes and ears" of our agriculture abroad—have assumed a new prominence. And many questions are being asked, such as these:

What are the duties of an agricultural attaché?
What are his qualifications?
What are his opportunities?

The story of agricultural attaché work abroad begins with the history of the agricultural attaché system itself. These attachés were first officially established in the Department of Agriculture by an act of Congress in 1930, but were transferred to the Department of State by executive order in 1939. They now have been returned to the Department of Agriculture under a provision of the Agricultural Act of 1954, passed by the 83rd Congress.

In signing the Act, the President stated that the attachés were being shifted to the Department of Agriculture "in order to sharpen the effort to find new world markets for our agricultural products." These words reflect the major emphasis now being placed on the activities of the attachés. And the shift enables them now to report directly to the Department of Agriculture and to devote their full time to representing United States agriculture abroad.

What are the duties of an agricultural attaché?

The attachés have always been this Nation's chief suppliers of world agricultural "economic intelligence." The attaché at each post is required to submit regular reports on specified subjects on specified dates. These reports, together with special reports filed from time to time, deal with such subjects as marketing opportunities abroad, the foreign production of specific agricultural commodities that may compete with those of the United States, and estimates of export possibilities and import requirements in the country to which he is assigned.

Such information helps American agriculture to adjust, both in its production and in its marketing, to changing situations. The information also helps exporters to determine areas in which they may be able to develop markets and provides them with background data essential to their operations.

But emphasis today is being placed on another phase of attaché activity—the one in which the attaché seeks markets and market opportunities for United States agricultural products. The attachés assist in moving commodities into export by working with foreign governments with respect to trade barriers, by bringing together foreign importers and United States exporters under conditions favorable to trade, and by keeping in close touch with the reception of United States products by foreign consumers and suggesting improvements that may lead to increasing preference

U.S. DEPARTMENT OF AGRICULTURE

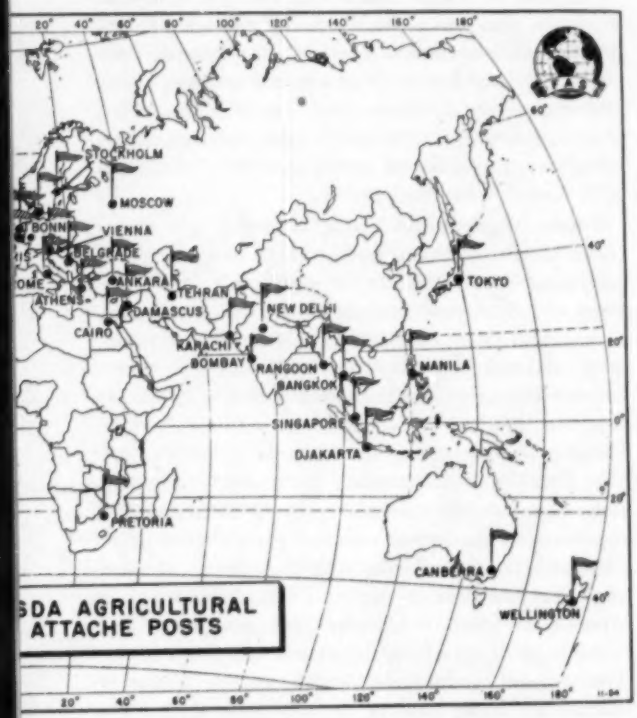
Agricultural Attach s Representatives Abr oa

for and larger consumption of American farm commodities.

Equally important at the present time, is the help that the attachés give in promoting the Nation's foreign disposal program for farm commodities. Already agricultural attachés have actively assisted foreign governments to develop plans relating to Public Law 480, which provides for the sale of surplus farm commodities for foreign currencies. Agreements being negotiated with the help of attachés may involve $400 million worth of commodities in the first year of program operation.

There is one function, however, that agricultural attachés do not perform. Contrary to popular belief, attachés are not assigned to foreign countries to advise them on how to improve their agricultural research and practices. Where this type of work is carried out, it is done under technical assistance programs and personnel and is the main responsibility of another government agency.

The average attaché may find that his time is divided roughly into three parts. He spends about one-third of his time in gathering information from trade contacts, government officials, and traveling in the country; one-third in preparing reports for transmission to Washington; and the other third in activities that vary a great deal according to the post, such as looking after agricultural visitors, servicing trade contacts, and representing the U. S. Department of Agriculture at various government functions. In addition he reports on new research developments, outbreak of animal diseases and plant pests, and other information of interest to the U. S. Department of Agriculture.



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What are the qualifications of an agricultural attaché

Generally speaking, an attaché should be the graduate of an agricultural college. In addition, he should have had several years of experience in agriculture, either in the Department of Agriculture, in farm organizations, in an agricultural college, in farming, or in an agricultural trade. Agricultural economic training is perhaps the most highly beneficial training of all since the work of an attaché requires a great deal of economic analysis.

It is not required that an attaché be able to write and speak foreign languages, though such accomplishments can be of considerable advantage.

To be a successful agricultural attaché requires work, patience, and diplomacy every day. It requires taking time to read what is going on at home in the States and to engage in the give and take of social affairs. In this last connection, an attaché's wife is important to his success. For it is more necessary abroad to become well acquainted with contacts than it is at home. It is necessary to develop and maintain social relations with trade and government contacts. And it is necessary to entertain important agricultural visitors.

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What are the opportunities of an agricultural attaché?

First of all, it is obvious that an attaché has opportunity to meet interesting people and visit interesting places. Of all the incentives in agricultural attaché work, this is perhaps the strongest. Attachés are assigned to the capitals of all the major countries of the world. And they are assigned also to many of the smaller countries which either import United States agricultural products or produce competing crops in significant quantities. In most countries the attaché is part of the United States mission and serves as adviser to the chief of mission on agricultural matters.

Agricultural attachés generally are assigned abroad for a term of 2½ to 3 years. They may take home leave after completing a term abroad, and they also receive annual leave while serving at their foreign post. In the past, many attachés have spent extended periods abroad, returning to the United States only on home leave or between assignments. Under the new Agricultural Act, however, the Secretary of Agriculture is authorized not only to assign attachés abroad, but also to transfer them back again to serve within the Department. By having complete interchangeability between Department employees overseas and those in the United States, it is felt that the job of both can be done more effectively.

The salaries of agricultural attachés range, in general, from about $8,300 to $11,800 and those of assistant attachés, from $5,000 to $10,000. A salary depends upon the qualifications of the individual and the responsibilities which he is assigned. In addition to the salary, the Government pays quarters or rent allowances while the attaché is abroad and also pays travel for the officer and his family to and from the post.

An expansion of the agricultural attaché system is planned for the future. There are now 40 posts with 55 officers stationed in foreign countries. We hope to be able to expand this number to 55 posts staffed by 80 officers.

These facts, then, tell the story of agricultural attaché work. The work is of vital importance to the success of American agriculture in maintaining and expanding its traditional markets abroad. And it provides a way of life that has proved satisfying to the many career attachés now serving in posts around the world.

FAS Publications That Report The News of Foreign Markets

Readers of *Foreign Agriculture* might find useful some other publications issued by the Foreign Agricultural Service.

Foreign Crops and Markets is issued weekly to assist the foreign marketing of United States farm products by providing information on current crop and livestock conditions abroad, foreign trends in production, prices, supplies, and consumption of farm products, and other factors affecting world trade in agricultural products.

Foreign Agriculture Circulars contain more detailed information than is published in *Foreign Crops and Markets*. They are issued at irregular intervals, and cover the following subjects: Citrus fruits, deciduous fruits, dried fruits, vegetables (including dried beans), livestock and meats, poultry and eggs, dairy products, fats and oils, nuts, rice, grains (except rice), sugar, coffee, tobacco, hops, cotton, vegetable fibers (except cotton), wool, and agricultural trade and policy.

Foreign Agricultural Trade, a series, gives statistics on United States foreign trade in agricultural products. The series includes monthly, calendar-year, and fiscal-year summaries, in which the data are presented as follows: (1) Monthly—commodity totals, quantity and value; (2) Calendar year—commodity totals, quantity and value; (3) Calendar year—country by commodity, value only; (4) Fiscal year—commodity totals, quantity and value; (5) Fiscal year—commodity by country, quantity only. The monthly summary, published about 2 months after the month covered, gives that month's data and the cumulative total for the fiscal year, with the same data for the year before; it also gives quantity indexes, a narrative interpretation, and a two-page digest of developments in foreign trade. The annual summaries, which appear about 3 months after the close of the year, give data comparable with those in the monthly summaries and extensive historical tables going back several years.

Another report in the series, *United States Imports of Fruits and Vegetables Under Quarantine*, gives the quantities of fresh and frozen fruits and vegetables imported under quarantine provisions and restrictive orders during the fiscal year.

These publications are distributed free in the United States upon request.

Agriculture and Democracy In the Middle East

by **AFIF I. TANNOUS**

United States interests in the Middle East have increased in number and expanded in scope since the days of World War II, and United States policy for that region has taken on an increasingly definite form and positive expression. These interests and this policy—involving cultural, economic, strategic, and political relations—constitute an integral phase of the global and historical endeavor now being made by the United States in international affairs, in vigorous support of democracy. It has become increasingly evident that the degree of success to be attained by such an endeavor will depend upon the extent to which it embraces all the major forces that make up the American way of life.

Such a force is agriculture. It has been playing an important role in the implementation of United States foreign policy, but it could play an even more important one. For agriculture is a cornerstone of American democracy, and at the same time is the occupation and way of life for the majority of the people of the world, especially people in countries like those of the Middle East, where modern development is in its early stages.

To strengthen and secure the Middle East for democracy; to restore, maintain, and increase stability in the region; to assist the various cooperating countries in their effort to develop their resources and raise standards of living among their peoples; to maintain and strengthen the traditional business and cultural ties between these countries and the United States: These, in brief, have emerged as the major objectives of United States policy in the Middle East since the end of World War II. On numerous occasions at home and abroad, officials of the United States Government have stated them in one form or another.

Furthermore the United States, as Government and Nation, has taken action in cooperation with the countries of the region that leaves no doubt regarding the genuine desire by all concerned for the attainment of these objectives: The United States has extended requested military aid to several countries, with a view to strengthening regional security; its persistent and positive mediation effort has borne fruit in the solution of the historic Suez Canal problem and the explosive Iranian oil dispute; perhaps most outstanding, and certainly most promising as a long-range activity, has been the extension of United States technical and economic assistance, either directly or through the United Nations, to practically every country in the region, for the development of natural and human resources. Considering the agricultural character of the Middle East, it is small wonder that American agriculture has played an important role in this assistance.

As an occupation of the majority of the people and as the main pillar of national economies, agriculture has dominated the scene in the Middle East for centuries. Only in recent years, however, has there developed among Middle Eastern people and their leaders a consciousness of the region's agricultural foundations and a wide concern for agricultural problems and potentials.

Between 70 and 80 percent of the total populations of the various countries depend upon agriculture and closely related industries for a living. This is true of densely populated and intensively cultivated Egypt and Lebanon, as well as of sparsely populated and extensively cultivated Syria, Iraq, and Iran. It is also true of Saudi Arabia and young Libya, where agriculture consists chiefly of the grazing of livestock by nomadic and seminomadic tribes. It is the people on the land, whether sharecroppers, small owners, or big landlords, whether tribesmen or settled villagers, who produce the basic agricultural wealth and account for a major share of the national income and of the national exports.

Egypt provides an outstanding illustration. Most of its more than 21 million people are cultivators

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of the soil, living on a total cultivated area of some 6 million acres that is intensively cropped with the aid of irrigation. Its national economy and foreign exchange earnings depend heavily upon the production and processing of a few leading crops—long-staple cotton, bread grains, rice, and clover. Over 90 percent of the total value of its normal exports is accounted for by agricultural items. At the same time its imports include large quantities of bread grains and other food items, required to meet the needs of a dense, rapidly increasing population with relatively limited land resources.

Iraq, too, is an agricultural country. Most of its people--there are only about 5 million—are engaged in settled or tribal agriculture. Its cultivated areas, mainly under irrigation, amount to some 6 million acres, with a potential of 20 million. The economy of the country is maintained basically by its internationally famous date crop and its grains and livestock products.

Emphasizing the role of agriculture in the economic development and stability of the Middle East is not to neglect or belittle the contribution of the other segments of the economy. Tourist trade, oil exports, and industrial activity are of undoubted importance and are capable of further development.

Industrial activity is limited, however, to the expansion of light industries, mainly those related to the processing of agricultural items: materials and power resources for developing heavy industry are either inadequate or lacking. Oil is highly significant only in a few countries of the region, notably the Arabian Peninsula, Iraq, and Iran. Of course it may yet be discovered in large quantities in other countries. But the fact remains that oil, unlike agriculture, is not a basic industry of the people. It is not a part of their daily pattern of living. Income from it does not touch them directly. And sooner or later it will be exhausted as a source of wealth. The great problem that oil development in these countries has brought is how to utilize its benefits widely in the rest of the economy, and thus to raise living standards for the people. Iraq has taken a firm sound step toward solution by allocating the major portion of its annual oil revenues to national production projects.

With such limitations on these segments of the economy, agriculture emerges as the more basic and dominant force in the economic development of the area.

This overwhelmingly agricultural character of the Middle East, and similar underdeveloped areas of the world, clearly indicates a major channel through which United States policy can be attained. If economic organization in these aspiring countries is to be soundly balanced on solid foundations; if accruing benefits are to reach equitably the greatest number of people; if stability is to be secured, as it should, at the center of gravity—i.e., in the agricultural sector—in these national organizations; then agriculture and complementary industries must be further developed through a major assistance effort.

Already, American agricultural technology, through private business and government, has made promising beginnings within the United States technical assistance program; but it certainly could play a much greater role, and thus serve more effectively the policy we hold in common with friendly nations. Water-spreading for the benefit of tribal herdsmen, more efficient irrigation techniques, conservation of land and water resources, range management, reforestation schemes, improved seed and other techniques for increasing food production for local consumption, food processing methods to help expand and improve the people's diet, judicious use of farm machinery, and the development of cottage industries are examples of the many fields in which expanded American assistance would produce basic permanent results.

It must be strongly emphasized, however, that American agricultural technology, transplanted as such into a cooperating underdeveloped country, cannot possibly function and produce as effectively as it does in its own environment. In fact, in some countries, economic disorganization, rather than development and prosperity, has been the result. Examples are the displacement of abundant and cheap farm labor by the tractor; soil erosion resulting from intensive cultivation by modern machinery; inadequate distribution of farm credit and costly imported equipment owing to the lack of organization and the needed institutions; frustration of increased food production by outmoded means of transportation and marketing within the country; arrested development of efforts to improve seed varieties and methods of cultivation because of the lack of effective systems of research and extension; and obstructions offered by prevailing systems of land tenure to progressive agricultural development.

Date pickers at Qatif, Saudi Arabia. Dates are one of the most important food crops of the Middle East and one of the principal sources of foreign exchange.

Consequently the role of American agriculture in this international cooperative endeavor goes farther than the mere transmission of technical skills. It must be an all-inclusive role in order to bring permanently fruitful results. It must give full consideration to the foundations of agricultural economic organization and related systems, as well as the resultant technology. This development is inherently a relatively slow process, involving cooperative effort on a long-range basis, but the outcome will be permanent and self-developing. And it is of the very essence of self-help, which lies at the heart of United States technical assistance philosophy.

An outstanding feature of technical assistance is that it is not one-sided in its benefits. As it has been legislated for and envisaged, technical assistance rests squarely on the principle of cooperation and mutual benefit through the exchange of knowledge. It may be that in the early stages of implementation of the program, because of the greater and more urgent needs of the cooperating countries, this important phase has not been given the attention it deserves.

It is a matter of history, however, that agricultural development in the United States owes a great deal to other parts of the world for the plants and animals they have contributed. To the Middle East, certainly, where agriculture has been practiced continuously for several thousand years, our debt is outstanding: From it we have received, either directly or indirectly, such good things as alfalfa, wheat, barley, dates, olives, the Arab horse, and the Angora goat. And our scientists have utilized plant and animal strains from the area in fruitful agricultural research and experimentation.

There is no doubt that the flow of this kind of material and information from the Middle East, for the ultimate benefit of both sides, can be increased immensely by American agriculture's participating more actively on a long-range basis in the technical assistance programs in the region. By virtue of its being relatively underdeveloped, this part of the world holds great promise for discovery in animal and plant life and in agricultural techniques. Our technicians and scientists, though they have been working there for only 2 or 3 years, agree that, through diligent study under the varied physical and biological conditions of the region, new items could be discovered, important lessons learned, and immediate and long-term benefits reaped.

Then there is the matter of trade, which is, of course, a major interest of the United States in relation to the region. Obviously, the various countries involved cannot expand their international trade activities unless they develop their resources and raise standards of living among their peoples. Recognition of this fact was one major reason for the development of the United States technical and economic aid programs.

As far as agriculture is concerned in this respect, the more actively and comprehensively our American agriculture participates in this cooperative assistance program, the greater opportunity it will

have to safeguard and promote its own interests, as well as those of the Nation as a whole, and also those of the participating countries. This is the concern not only of the various governmental agencies involved, but also of the leading private agricultural organizations and industries. The reward for such enlightened and comprehensive participation will be the gaining of greater and continuous assurance that production of such complementary crops as are in demand in the United States will be encouraged, that effort will be diverted from the expansion of competitive crops for which there is no real demand in world markets, that greater support will be given to the conservation of agricultural resources and the production and processing of food crops for greater domestic consumption, and that research in and development of certain strategic items that are needed in the United States will be undertaken on a long-term basis.

Furthermore, American agriculture has assumed recently an unprecedented authority and responsibility in this matter by virtue of Public Law 480, which was approved by Congress on July 10, 1954. It is entitled "Agricultural Development and Assistance Act of 1954" and has as a central objective the utilization of foreign currency proceeds accruing from the sale of surplus agricultural commodities "to expand international trade, to encourage economic development, to purchase strategic materials . . . and to foster in other ways the foreign policy of the United States." A portion of these proceeds may be utilized in the various U.S. aid programs authorized for friendly countries, including those of the Middle East. This would bring American agriculture into much closer relationship with these aid programs and permit it to participate in them more actively.

Agriculture is not only an economic activity, however; it is also a way of life. It is a way of life for people everywhere in the world. It has its traditions, customs, and institutions with roots reaching deep into early human experiences in the development of community and society.

In the United States this agricultural, or rural, way of life lies at the foundation of the total national culture and contributes substantially to its democratic processes. Manifestations of this reality can be readily discerned in the relative stability of the agricultural profession; in the security and creative initiative gained from the independent farm-family ownership of the land; in the solidarity of the farm family; in the face-to-face primary group relationship and the consciousness of belonging directly to a community, which are of the essence of the democratic process; in the high esteem and adequate rewards accorded productive manual labor; in cooperative organizations flourishing side by side with private enterprise; and in an integrated system of government-farm relationship based upon the dynamic concepts of the official serving the interests of the farmer, decentralization of authority and responsibility, belief in and support for agricultural research and education, and extension based upon cooperation and self-help.

In the Middle East, agriculture is even more dominant in the pattern of living. The tribal community, an important entity in several of the countries, has made major contributions to the total national organization. The village community, where all farmers live, has made similar contributions. Those two basic units have evolved in this perhaps oldest part of the world since the dawn of human history. Their deep-rooted traditions, folkways, institutions, and values make up the basic pattern of Middle Eastern life, which includes family solidarity, strong community identity and consciousness, personal touch in human relations, mutual aid, effective social control, and business enterprise undertaken as a family activity.

From these basic realities of rural life in both the United States and the Middle East emerges the call to American agriculture to make its contribution complete, involving its institutional roots as well as its improved techniques. The exchange of concepts, methods, and systems with respect to such matters as land-man relationship, training, cooperative extension, government-farmer relationship, community spirit, and the worth of the cultivator as a citizen—be he owner, tenant, or laborer—is certainly a fundamental prerequisite to the exchange of production skills. It must be so as long as the cause of democracy constitutes the primary motivation of United States policy, and as long as the strengthening of the democratic foundations of prosperity and stability constitutes the ultimate objective of this cooperative international endeavor.

This conclusion gains further support from a consideration of the most outstanding internal problem confronting the Middle East and other underdeveloped regions. It is the problem of the great gap that separates the small minority of the elite—

the highly educated, the prosperous, the rulers, the leaders—from the great majority of the people, most of whom are the producers of agriculture. Traditionally the lot of this majority has been one of neglect, deprivation, and frustration, a sad fact that is clearly indicated by high rates of illiteracy (70 to 80 percent) and of infant mortality (15 to 20 percent); by landlessness or too small ownership (60 to 70 percent); by low levels of living (an estimated annual family income of $200 to $300); by the prevalence of such vitality-sapping diseases as trachoma, bilharziasis, hookworm, typhoid, and dysentery; and by wasteful underemployment.

The result has been the development of a dangerous vacuum and of mounting tension in the national organizations of most of the Middle Eastern countries. Upheavals have occurred in some of these countries, and a state of instability has been the rule. The situation has not yet been rectified. A promising trend has emerged, however, and is gaining strength. It is the serious effort of a growing enlightened leadership to reduce the vacuum and to bridge the gap between the elite and the masses through action programs in several fields of endeavor aimed at improving conditions in the important agricultural sector. A current and hopeful illustration of this trend is the recent vigorous reform and development movement in Egypt, which has as a central objective the social and economic development of the fellaheen.

In assisting this positive and constructive trend, American agriculture is certainly equipped and qualified, technically and institutionally, to play an important role.

Back from a trip through our most important wheat markets, Mr. Corey passes on to exporters some of his observations.

Keeping Our Wheat Markets

By EARL COREY

For two years United States agriculture has been watching its share of the world wheat market dwindle, from about one-half of the total to barely one-fourth. It is true that the world is consuming more wheat than it did before the war, but most importing countries have now increased their own production to the old prewar levels and some have gone even beyond them. As a result, the world is better supplied than it has been for a long time, prices are down, and importers are driving hard bargains.

In one way and another we have partly adjusted ourselves to the change, but even so we are still geared to export more wheat than foreign markets are buying from us. What can we do to enable our exporters to keep that share of the markets they now have, or perhaps to gain a little more?

To answer this question I traveled for 3 months in the late summer of 1954 through nine countries of Western Europe—England, Ireland, France, Belgium, the Netherlands, Germany, Switzerland, Italy, and Spain—countries that together make up nearly two-thirds of our market for wheat.

To say that the answer to this question lies solely in the factors of price and quality is to oversimplify. For, under the circumstances that affect world trade today, these factors are complicated by many others—by the nature of the market itself, for instance, and by the particular needs and standards of importers, the pricing systems of competing sellers, and the increased production and price supports in importing countries. Thoughtful attention to these complications, however, may show us some ways in which we as exporters can improve our prospects.

We must accept the fact that we are in a buyer's market. If we are to sell our goods, we must adjust our selling methods to the customs and practices of the buyer.

In only one of the countries I visited was almost any kind of wheat acceptable. Much of Western Europe is a quality market—that is, it will buy only the wheat that fills its particular needs—and the buyers insist on seeing a sample. Such a market is the United Kingdom: to it the supplying country furnishes a sample of the fair average quality, which is filed with the London Corn Trade Association.

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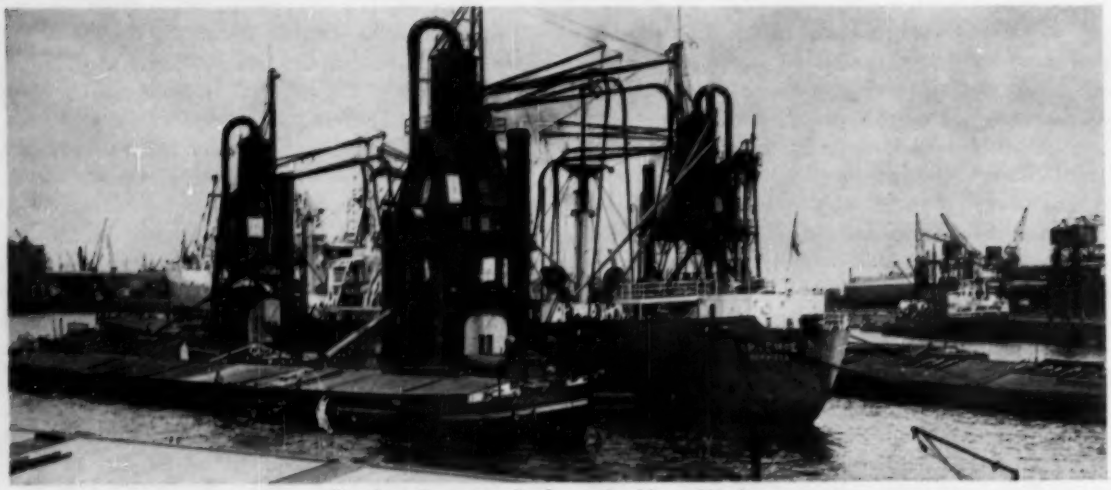

Floating elevators unload a grain ship at Hamburg.

But even in this strictly quality market one of our competitors has its grades accepted without question. A few countries, such as Germany and the Netherlands, will probably still buy from us "certificate final," i.e., without sample but on the basis of our certified statement of quality; first, however, we will have to establish the integrity of our certificates.

Many countries have baking practices similar to ours and their bakers demand flours that are consistently the same types as those used here. To fill the demand, their millers must have wheats that make those flours. If they buy from us on the basis of price and grade alone, they are not sure of getting what they need: the grade certificate, indicating, as it does, the numerical grade only, is not sufficient to insure that the wheat is adapted for the use to which it is intended.

For instance, Soft Red Winter varieties, if grown under the same conditions as Hard Red Winter, may be so similar to the Hard in appearance that only with difficulty can they be distinguished; they may in fact be graded as Hard. Millers who buy them under that grade for bread flour are understandably disappointed in the quality of the product: Soft Red Winter is excellent for cake flour but not strong enough in gluten to make a fine big loaf of bread.

Besides, many of our shipments of wheat barely meet the requirements of the grade; some contain the maximum amount of foreign material, for instance, and the maximum "W.O.C." ("wheat of other classes"). It is common knowledge that our No. 2 Hard Winter grade permits the admixture of many wheats and matter not present when the wheat left the farm. In Europe I was shown samples of United States wheat that were anything but a credit to either our wheat or the trade. Naturally, as long as we permit such grains to represent us, we can scarcely be surprised at the heavy criticism they elicit. In improving our export standards we might even explore the matter of a separate or special grade for export, although such standardization is loaded with undesirable features and may well deserve consideration only as a last resort.

To complicate matters further is the fact that every other country naturally has a grading system different from our own. When our wheat is examined by their standards, many things show up that are not considered in our grades; and, for the reason that we have nearly all the varieties and grades in the world, our wheat shows up with all its possible shortcomings. In the stockpile of one country I saw wheat that had a test weight of 62 pounds and on that basis would have graded No. 1; but, because it was damaged and contained "W.O.C." and foreign matter, it had been graded No. 2. Under our standards, it was No. 2 wheat; under theirs, it hardly qualified as wheat.

In one country, the government has all the wheat cleaned before permitting it to go the mill; and when United States wheat has an excessive amount of screenings as compared with that of our competitors, it means a direct dollar loss.

Besides looking to our grading standards, we might well consider the importance of proper load-

In the hold of the ship, workers direct the nozzle of the suction tube that draws the grain up into the head of the floating elevator.

ing supervision. The effect of uneven loading shows up when the wheat is unloaded, and leads to further confusion and criticism of our quality. For example, most of the wheat for Germany, Belgium, the Netherlands, and Switzerland is unloaded in Rotterdam, Hamburg, Amsterdam, and Antwerp and is distributed from there. Floating elevators come alongside the ships and unload the cargo by suction. The grain is drawn up into the head of the elevator, where it is sampled and weighed; and from there it is loaded directly into barges and lighters for transportation upriver to destination. If there is a heavy concentration, say, of "W.O.C." in one part of the cargo, it is likely to find its way into one or two barges. Unfortunately, it is the barge with the really low quality that gets all the publicity and so discredits the quality of the whole cargo, which otherwise was probably excellent.

Another thing we must bear in mind is that only about 30 percent of the world's trade in wheat occurs within the International Wheat Agreement (IWA). Included in the rest are transactions between countries having bilateral agreements, state trading, and outright barter deals. Under these circumstances, it is difficult to determine what a price really is; but, on the other hand, enough trade goes on where price *is* known to enable us to decide whether the United States should be a competitor. Our price problem and quality differentials are matters that should be determined either through discussion with our competitors, or by price.

One of the factors that undoubtedly has diverted a good deal of trade from us is the pricing policy of Canada and Australia, by which price is fixed at some date subsequent to the date of the bill-of-lading—in Canada, after 5 days; in Australia after 30 days. This practice permits the importer to have the wheat either in his elevator or close to it by the time it is necessary for him to fix a price and pay for the wheat. It reduces both his price hazard and the amount of money necessary to cover his inventory; and the latter is no small item, considering the amount of interest on a cargo of wheat.

Another of the circumstances that affect our trade is that every country I visited has a price-support program for home-grown wheat. The prices range from about $2.30 a bushel to $3.30. In some countries, the cheaper price of imported wheat is reflected in the price to the miller, who nonetheless must use a certain proportion of home-grown wheat in his flour and so finds a severe strain placed on his budget. In other countries, the imported wheat is bought by a state agency, which sells it to the miller at the local support price and thus picks up a profit in the process.

This urge for self-sufficiency is understandable, especially after two world wars and the Korean affair. Only as the European countries see an assured supply at home or with their neighbors, will they change their approach to the problem. Many of the people I talked with said that the IWA gives them only the privilege of buying wheat at a price and does not guarantee that they will get it in periods of emergency. They admit that to produce wheat at home is not economical, but point out that at least what they produce is there when they need it. Some countries are attempting to carry reserve stocks; in all but one, however, the reserves appear totally inadequate for a situation such as a world conflict. In England, Ireland, and northern Europe, the 1954 wheat has been harvested in most unfavorable weather; as a result most of the wheat is of distinctly low milling quality and much of it will have to be fed to livestock.

Many of these factors may seem discouraging. But do they not all point toward one conclusion—that we can compete in the European wheat markets if we are willing to get our quality up, make our certificates acceptable, meet Canadian and Australian competition on price methods, and get our prices in line?

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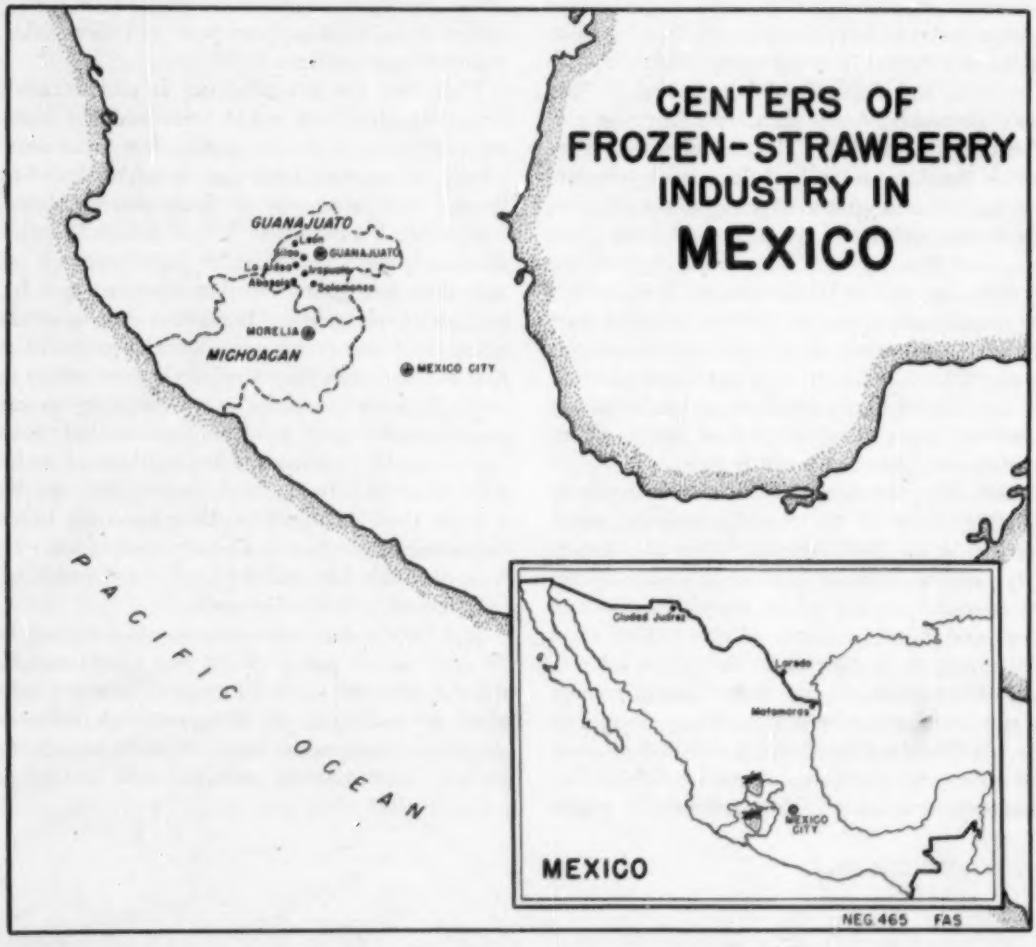
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